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THE COMPREHENSIVE PLAN

PROTECTION

THE MASTER PLAN

It shall be the function and duty of the commission to adopt and maintain, including necessary changes therein, a comprehensive, long-term, general plan for the improvement and future development of the city and county, to be known as the master plan. The master plan shall include maps, plans, charts, exhibits, and descriptive, interpretive, and analytical matter, based on physical, social, economic, and financial data, which together present a broad and general guide and pattern constituting the recommendations of the commission for the coordinated and harmonious development, in accordance with present and future needs, of the city and county and of any land outside the boundaries thereof which in the opinion of the commission bears a relation thereto.

Excerpt, Charter of the City and County of San Francisco.

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THE COMPREHENSIVE PLAN

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City and County of San Francisco □ Department of City Planning

City planning
Conservation

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FOREWORD

The Plan for Environmental Protection, an element of the Comprehensive Plan, addresses the impact of urbanization on the natural environment. In highly urban San Francisco environmental protection is not primarily a process of shielding untouched areas from the initial encroachment of a man-made environment. The scales already are and will continue to be balanced toward the side of development.

The challenge in San Francisco is to achieve a more sensitive balance, repairing damage already done, restoring some natural amenity to the city, and bringing about productive harmony between people and their environment. An important purpose, therefore, of an environmental protection element is to give natural environmental amenities and values appropriate consideration in urban development along with economic and social considerations.

One of the lessons of the increasing environmental consciousness is that "environment" is not accurately compartmentalized as animals and trees versus people and cars. In an urban setting this is particularly true. All elements of the Comprehensive Plan deal to a certain extent with protecting aspects of the total urban environment. In that sense the objectives and policies contained in this element must be read together with other objectives and policies throughout the Comprehensive Plan. However, this element is mainly concerned with protecting what is not man-made in the environment, especially through protection of plant and animal life and through restoration of natural qualities of land, air and water by elimination of pollution.

Deterioration of the environment as a consequence of population growth, urbanization, industrialization, resource exploitation and technological developments has been a growing concern world-wide. On a national and state level, it has given rise to policies and controls dealing with air, water and noise pollution and other forms of degradation of the natural environment. It was logical, therefore, that in giving direction to local general plans the California Legislature should have mandated preparation of two elements which address environmental protection issues, one for natural resource conservation and another for transportation noise. This Plan for Environmental Protection combines those two state-mandated elements.

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The Plan for Conservation, a Section of the Environmental Protection Element, was adopted by Resolution 7020 of the San Francisco City Planning Commission on May 24, 1973.

The Plan for Transportation Noise Control, a Section of the Environmental Protection Element, was adopted by Resolution 7244 of the San Francisco City Planning Commission on September 19, 1974.



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INTRODUCTION

CONSERVATION AS RESOURCE MANAGEMENT

Conservation, as a "resource ethic," is based on the premise that resources are not commodities to be developed and consumed in whatever amount that users demand or can afford. Unrestricted development and use of resources may either exhaust or pollute the supply. Resources, consequently, should be managed in ways that will assure their availability for generations to come.

Sensible resource management does not exclude, by any means, the development and utilization of resources. Nevertheless, with the population of the nine-county Bay Region expected to grow to 5.5 million persons by the year 1980, increasingly greater demands will be placed on these resources. Programs are already in force to conserve and in some cases to improve the quality and supply of our resources. Some of the programs may need to be strengthened.

SCOPE OF THE PLAN

As a very urban place, San Francisco is not as extensively involved as rural counties are in the conservation of natural resources. Of those resources which the State Legislature directed to be included in the Conservation Plan, the following are not found in San Francisco to any appreciable extent:

- Rivers
- Water with hydraulic force potential
- Minerals

These resources, consequently, are omitted from the plan. Natural resources that properly concern San Francisco are:

- Waters of the Bay and Ocean
- Fish and other marine animals
- The shoreline
- Air
- Fresh water for consumption and fire fighting
- Land
- Plants and animals of the city's land area and lakes

Finally, and of particular concern to San Francisco, are the special urban amenities which may combine both natural and man-made resources. For San Francisco, almost wholly developed, conservation of those man-made features of high quality and cultural value may be more important than the natural features of the environment that are of such importance to rural areas of the State. The Urban Design Plan focuses on how these special qualities of San Francisco may be preserved.

EXISTING REGIONAL EFFORTS

A number of official regional agencies operate to regulate the use of resources as related to San Francisco: the San Francisco Bay Conservation and Development Commission, the Bay Area Air Pollution Control District, the California Regional Water Quality Control Board (San Francisco Bay Region), and the newly formed North Central Coast Regional Commission. San Francisco's participation in

these regional efforts goes a long way toward achieving the goals of resource management. Accordingly, the Conservation Plan does not propose new policies to replace those already adopted at the regional level.

RELATION TO OTHER COMPREHENSIVE PLAN ELEMENTS

Conservation, in the broadest sense of the word, refers to the entire process of determining to what extent any of the city's resources—natural as well as man-made—should be protected or used. To limit the scope of the Conservation Plan, therefore, to strictly natural resources (as required by State planning law) seems arbitrary. It implies that conservation is not an issue in residence, transportation, urban design, recreation, or any other Comprehensive Plan element and, furthermore, that conservation of the many worthwhile aspects of the urban environment is somehow of less importance.

Maintaining a proper balance between the preservation and the development of San Francisco's resources is an issue recognized in all the elements of the Comprehensive Plan. The Urban Design Plan, for example, indicates areas of the city where increased height and bulk of buildings would be permissible and areas where open space ought to be protected from any building. The City Planning Commission has adopted new Comprehensive Plan elements for Residence, Urban Design, Transportation, and Recreation and Open Space. To a varying extent, each of these plans deals with conservation. Objectives and policies from these plans that relate directly to conservation are listed on page 4. These are reaffirmed as an integral part of the Conservation Plan.

OBJECTIVES & POLICIES FROM OTHER ADOPTED COMPREHENSIVE PLAN ELEMENTS

URBAN DESIGN PLAN

OBJECTIVE 1

EMPHASIS OF THE CHARACTERISTIC PATTERN WHICH GIVES TO THE CITY AND ITS NEIGHBORHOODS AN IMAGE, A SENSE OF PURPOSE, AND A MEANS OF ORIENTATION.

POLICY 1

Recognize and protect major views in the city, with particular attention to those of open space and water.

POLICY 2

Recognize, protect and reinforce the existing street pattern, especially as it is related to topography.

POLICY 4

Protect and promote large-scale landscaping and open space that define districts and topography.

POLICY 7

Recognize the natural boundaries of districts and promote connections between districts.

OBJECTIVE 2

CONSERVATION OF RESOURCES WHICH PROVIDE A SENSE OF NATURE, CONTINUITY WITH THE PAST, AND FREEDOM FROM OVER-CROWDING.

POLICY 1

Preserve in their natural state the few remaining areas that have not been developed by man.

POLICY 2

Limit improvements in other open spaces having an established sense of nature to those that are necessary, and unlikely to detract from the primary values of open space.

POLICY 3

Avoid encroachments on San Francisco Bay that would be inconsistent with the Bay Plan or the needs of the city's residents.

POLICY 4

Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.

POLICY 7

Recognize and protect outstanding and unique areas that contribute in an extraordinary degree to San Francisco's visual form and character.

POLICY 8

Maintain a strong presumption against the giving up of street areas for private ownership or use, or for construction of public buildings.

TRANSPORTATION PLAN

General

OBJECTIVE 2

USE THE TRANSPORTATION SYSTEM AS A MEANS FOR GUIDING DEVELOPMENT AND IMPROVING THE ENVIRONMENT.

POLICY 3

Reduce pollution and noise.

POLICY 4

Design and locate facilities to preserve the natural landscape and to protect views.

Thoroughfares Plan

OBJECTIVE 1

ESTABLISH A THOROUGHFARES SYSTEM IN WHICH THE FUNCTION AND DESIGN OF EACH STREET ARE CONSISTENT WITH THE CHARACTER AND USE OF ADJACENT LAND.

POLICY 1

Divert automobile and truck traffic from residential neighborhoods onto major and secondary thoroughfares and limit major thoroughfares to nonresidential streets wherever possible.

POLICY 2

Design streets for a level of traffic that will not cause a detrimental impact on adjacent land uses.

POLICY 4

Discourage nonrecreational and nonlocal travel in and around parks and along the shoreline recreation areas.

RECREATION AND OPEN SPACE PLAN

OBJECTIVE 2

MAINTAIN AN UNBROKEN STRETCH OF NATURAL PUBLIC OPEN SPACE FROM FORT FUNSTON TO THE EASTERN EDGE OF THE PRESIDIO. DEVELOP OPEN SPACES AND RECREATION FACILITIES WHICH COMPLEMENT THE URBAN CHARACTER OF THE NORTHERN WATERFRONT AND BAY SHORELINE.

POLICY 1

Require all development within the shoreline zone to conform with shoreline use provisions, to incorporate open space, to improve access to the water, and to meet urban design policies.

POLICY 2

Improve the quality of existing shoreline recreation areas.

POLICY 3

Provide new public parks and recreation facilities along the shoreline.

POLICY 4

Preserve the open space and natural character of the Presidio.

OBJECTIVE 3

DEVELOP A DIVERSIFIED AND BALANCED SYSTEM OF CITYWIDE RECREATION AND OPEN SPACE.

POLICY 1

Preserve public open space.

POLICY 3

Gradually eliminate nonrecreational uses in parks and playgrounds and reduce automobile traffic in and around public open spaces.

RESIDENCE PLAN

OBJECTIVE 1

MAINTAIN AND IMPROVE THE QUALITY AND DIVERSITY OF SAN FRANCISCO'S RESIDENTIAL COMMUNITIES.

OBJECTIVES AND POLICIES FOR CONSERVATION

General

OBJECTIVE 1

ACHIEVE A PROPER BALANCE AMONG THE CONSERVATION, UTILIZATION, AND DEVELOPMENT OF SAN FRANCISCO'S NATURAL RESOURCES.

San Francisco enjoys an abundance of natural beauty. Surrounded on three sides by water and graced with parks, lakes, and vistas, San Francisco provides a magnificent urban environment with the potential to exist in harmony with its natural surroundings. While years of exhaustive use of the natural landscape have depleted and polluted some of the city's resources, San Francisco is fortunate in that it is not entirely developed and has some rather outstanding natural resources remaining. Those remaining resources should be protected from further encroachment and enhanced in order to achieve the necessary balance between the conservation of natural systems and the normal functioning of the city. This means ending pollution; protecting vegetation and wildlife; controlling shoreline uses; developing guides for the use and development of land, water, and air; and, where desirable, increasing the supply of natural resources.

POLICY 1

Conserve and protect the natural resources of San Francisco.

A major thrust of science and technology in the oncoming years must be that of making cities more livable places by offsetting the imbalance between the natural and man-made environments. Man and his technology must become a more interrelated part of Nature and not an exploiter of the physical environment.

San Francisco must assure that its remaining natural resources are protected from misuse. The intricate relationships between living things and their natural and man-made surroundings should be recognized as primary in improving the quality of environment. The most important uses of existing resources should be those which provide maximum benefits for public use while preserving and protecting the natural character of the environment. Moreover, the supply and quality of resources should be considered as major determinants of the nature and extent of development that is dependent on them.

POLICY 2

Improve the quality of natural resources.

If the present trend toward environmental deterioration is to be curbed, all forms of pollution must be controlled and eventually eliminated. Those resources within the exclusive jurisdiction of the City should be guarded against contamination through local regulatory action. Where effective resource management against pollution requires regional action, San Francisco should support and comply with all anti-pollution standards of the region.

POLICY 3

Restore and replenish the supply of natural resources.

Undoing past mistakes must also be a major part of comprehensive environmental action. In this regard, San Francisco should undertake projects to acquire or create open space, cultivate more vegetation, replenish wildlife, and landscape man-made surround-

ings. Projects revitalizing the urban environment should be encouraged and receive top priority. With major efforts in this direction, the City will help reverse past trends toward the destruction of the natural qualities of the environment.

POLICY 4

Assure that all new development meets strict environmental quality standards and recognizes human needs.

In reviewing all proposed development for probable environmental impact, careful attention should be paid to upholding high environmental quality standards. Granted that growth provides new economic and social opportunities, uncontrolled growth can also seriously aggravate environmental deterioration. Development projects, therefore, should not disrupt natural or ecological balance, degrade the visual character of natural areas, or otherwise conflict with the objectives and policies of the Comprehensive Plan.

OBJECTIVE 2

IMPLEMENT BROAD AND EFFECTIVE MANAGEMENT OF NATURAL RESOURCES.

The urban environment will deteriorate unless protected by well-defined and effectively managed public programs. Additionally, the solutions to present environmental problems are tied up in significant and widespread social change in consumer choices and life styles. The establishment, ultimately, of broad-based, more effective environmental action programs will require involvement of individual citizens, citizen groups, government agencies, and elected officials. Such involvement is

essential in the identification of critical issues, development of specific goals and strategies, and the implementation of firm regulatory processes.

POLICY 1

Coordinate regional and local management of natural resources.

Historically, local government has been formed in response to local areas of need. Natural resources, however, often extend beyond the boundaries of municipalities, covering regions, inter-regions, and states. Thus, in the Bay Region, local government has become an ineffective instrument for the management of resources dispersed and interconnected throughout the region. With regard to the more diffuse environmental problems such as air pollution and managing the Bay, Ocean, and Shorelines, San Francisco is ill-equipped to solve the problems alone.

San Francisco should cooperate with existing regional agencies in developing methods whereby cities can lend support to regional efforts to improve the environment. The regional concept, supported and strengthened by well-conceived local programs, is essential to enhancing both natural and man-made surroundings.

POLICY 2

Promote citizen action as a means of voluntarily conserving natural resources and improving environmental quality.

A comprehensive program of citizen participation can assure that public policy will serve the best interests of all elements of society. Moreover, programs conceived through

extensive involvement of the communities to be served are generally more effective, for they reflect the desires of a multiplicity of people and thereby carry additional momentum. Since our physical environment is to be shared by all, a balance among all factors (human and economic) must be achieved.

POLICY 3

Provide environmental education programs to increase public understanding and appreciation of our natural surroundings.

If we are to preserve and enhance the quality of our surroundings, we must cherish their values. Environmental education programs promoting an understanding and appreciation of our natural systems serve to expand public awareness of environmental problems and man's place in the world.

Course instruction on the nature and problems of the environment should be continued and emphasized in the public schools, adult education centers, and colleges.

Bay, Ocean, & Shorelines

OBJECTIVE

MAINTAIN AND IMPROVE THE QUALITY OF THE BAY, OCEAN, AND SHORELINE AREAS.

In the past, the Bay and its waterfront were extensively used for commercial purposes and for waste disposal. The Ocean side



was largely free of this kind of activity. Although the utilitarian values of the water and shorelines are valid, expediency and short-term gain can lessen the value and attractiveness of these resources. There should be not only a balance between recreational and commercial uses but a balance between preservation and utilization of the Bay, Ocean, and Shorelines.

Protecting and enhancing the many values of these resources requires ending pollution of the Bay and Ocean, closely controlling commercial uses of the water and shorelines, preserving and adding to the recreational frontage along the water, and protecting and improving the existing recreational frontage.

POLICY 1

Cooperate with and otherwise support regulatory programs of existing regional, State, and Federal agencies dealing with the Bay, Ocean, and Shorelines.

Managing the resources of the Bay and Ocean and the abutting lands is under the regulation of a number of limited-purpose regional and State agencies. The region-wide scope of the problems calls for region-wide solutions.

San Francisco has representation on the multi-county agencies, and, consequently, its particular interests are considered along with those of the other constituent counties. When it is apparent, for example, that regionally operated facilities may be more costly to San Francisco than a local facility, common practice is to allow the local option so long as it meets regional performance standards. This policy of local option is essential to the spirit of regional cooperation. Conformity should



not override good sense. With this important proviso, San Francisco should support and cooperate with regional, State, and Federal agencies in setting and achieving goals for the conservation of the resources of the Bay, Ocean, and Shorelines.

POLICY 2

Promote the use and development of shoreline areas consistent with the Comprehensive Plan and the best interest of San Francisco.

Other portions of the Comprehensive Plan set policy on how the city's shoreline areas should ultimately be developed. They are the Recreation and Open Space and Urban Design Elements and the Northern Waterfront and South Bayshore area plans. The Bay Conservation and Development Commission (BCDC) and the North Central Coast Regional Commission also set policy on shoreline development. Within the framework set by these regional planning agencies, San Francisco should promote the use and development of its shoreline areas in accordance with those policies in the Comprehensive Plan that serve the best interests of the citizens of the city.

POLICY 3

Implement plans to improve sewage treatment and halt pollution of the Bay and Ocean.

San Francisco's *Master Plan for Waste Water Management* is an orderly plan for upgrading the collection, treatment, and disposal of San Francisco's sewage. The City should proceed as rapidly as possible to finance and construct facilities required to end the discharge of untreated and insufficiently treated sewage into the Bay and Ocean.

Regulations controlling the discharge of industrial wastes into the sewers should be vigorously enforced as a further means of preventing the pollution of the waters of the Bay and Ocean.

POLICY 4

Encourage and assist privately operated programs to conserve the resources of the Bay, Ocean, and Shorelines.

Voluntary, private organizations concerned about conservation deserve special recognition. They help keep conservation issues in the public consciousness. More importantly, they perform a watchdog function essential to effective enforcement. The City should seek the participation of voluntary groups in monitoring activities that affect the water and shore areas.

Air

OBJECTIVE

ASSURE THAT THE AMBIENT AIR OF SAN FRANCISCO AND THE BAY REGION IS CLEAN, PROVIDES MAXIMUM VISIBILITY, AND MEETS AIR QUALITY STANDARDS.

Air pollution is one of the major problems facing the cities of the San Francisco Bay Region. In San Francisco, the need for conserving the air resource and improving air quality is undeniable. While San Francisco benefits from having few large upwind industrial polluters and from certain topographical and climatic conditions, regional air quality standards continue to be exceeded on a number of days in the city.

The local air supply extends beyond the physical boundaries of San Francisco, covering the entire Bay Region, and effective air resource management must include regionwide planning, monitoring, regulations, and enforcement. San Francisco, however, can take certain actions which supplement and strengthen the efforts of existing regional programs. Local initiatives should be keyed to the curtailment of pollution emissions from sources typically found in San Francisco. Ultimately, solutions to the air pollution problem must be interrelated with virtually all facets of urban existence—industry, transportation, employment, housing, open space, recreation—even the products we buy and consume.

POLICY 1

Support and comply with objectives, policies, and air quality standards of the Bay Area Air Pollution Control District.

Regionwide monitoring of air quality and enforcement of air quality standards constitute the primary means of reducing harmful emissions. The conservation of San Francisco's air resource is dependent upon the continuation and strengthening of regional controls over air polluters. San Francisco should do all that is in its power to support the Bay Area Air Pollution Control District in its following operations:

- Monitoring both stationary and mobile sources of air pollution within the region and enforcing District regulations for achieving air quality standards.
- Regulating new construction that may significantly impair ambient air quality.
- Maintaining alert, permit, and violations systems.

- Developing more effective controls and methods of enforcement, as necessary.

POLICY 2

Encourage the development and use of urban mass transportation systems in accordance with the objectives and policies of the Transportation Plan.

During the 1950's and 1960's, San Francisco's resident population decreased while employment within the city increased. Consequently, the number of commuters traveling to and from San Francisco, usually by automobile, has risen, creating a serious threat to ambient air quality. Because of the highly centralized nature of San Francisco and the surrounding region, areawide rapid transit, integrated with convenient municipal transit systems, can be used effectively in reducing automobile emissions.

Urban mass transit systems should be encouraged, with the proper economic incentives, as the most sensible mode of urban travel. To this end, designation of express lanes for commuter buses on the Golden Gate Bridge and the San Francisco-Oakland Bay Bridge would help reduce motor vehicle emissions by encouraging greater use of public transit. Commuters should be encouraged to make the best use of mass transit services available to them. Swift, convenient transit service available during commute hours will provide a major incentive for rejecting the automobile as the primary mode of urban transportation.

Lastly, where feasible, diesel buses should be replaced with buses powered by electricity or other clean energy sources. Existing electric trolley bus lines should be retained wherever possible.

POLICY 3

Encourage greater use of mass transit in the downtown area and restrict the use of motor vehicles where such use would impair air quality.

San Francisco's downtown area is the major focus of the city and the region. Comprised of the financial-office district, a vast governmental administration center, and the stores, hotels and places of entertainment within the area, the downtown area provides the chief center of employment, shopping, and visitor accommodation in the entire Bay Region. Because traffic congestion is so prevalent, air quality often suffers.

Greater use of public transit to, from, and within the downtown area will reduce the amounts of pollutants emitted from motor vehicles. Furthering the objectives and policies of the Transportation Element of the Comprehensive Plan, a "transit first" approach would reduce air pollution in the downtown area.

Zones have been identified in which concentrated efforts to control automobile use should be pursued in order to reduce air pollution and to improve the pedestrian environment. A few downtown streets should be designated as traffic-free zones, allowing for the free-flowing movement of pedestrians. Additionally, some other streets in the area should be restricted to pedestrian, transit, delivery vehicle, and emergency use. Vehicle-free and restricted zones should be landscaped, have widened sidewalks, and be oriented to pedestrian use.

Finally, an increase in the frequency of shuttle bus service within the downtown area would provide a reasonable and convenient

alternative to the private motor vehicle as a method of travel in the central city.

POLICY 4

Promote the development of nonpolluting industry and insist on compliance of existing industry with established industrial emission control regulations.

The City and County of San Francisco, in cooperation with the Chamber of Commerce, should actively encourage the development and expansion of industries which do not add to the air pollution problem. Those industries which are a major source of industrial air pollution should be identified and made to comply with all industrial emission control regulations. They should be equipped with effective air pollution control devices.

POLICY 5

Exert leadership in the voluntary reduction of pollution emissions during air pollution alerts.

As provided in the Bay Area Air Pollution Control District's Emergency Plan, air pollution alerts will be called throughout the Bay Region when meteorological forecasts for any twelve-hour period indicate that air contamination levels will reach or exceed alert standards. During alert periods, Bay Area residents are encouraged to follow a set of voluntary actions to diminish air pollution concentrations. San Francisco should exert leadership during alert periods and assist the Air Pollution Control District in the following ways:

- Providing assistance in disseminating information on air conditions.

- Encouraging commuters and city residents to use mass transit systems instead of the automobile.
- Making the Police Department's helicopter available for spotting illegal burning in the city.
- Utilizing Police Department staff to issue citations for excessive automobile emissions.
- Utilizing Fire Department staff to detect illegal open burning and to refer violations to the Bay Area Air Pollution Control District for enforcement.
- Urging volunteer organizations to monitor compliance with emission control regulations.
- Promoting the establishment of emergency centers for persons with respiratory ailments.

Fresh Water

OBJECTIVE 1

ASSURE A PERMANENT AND ADEQUATE SUPPLY OF FRESH WATER TO MEET THE PRESENT AND FUTURE NEEDS OF SAN FRANCISCO.

The City and County of San Francisco owns and operates one of the most extensive water and power systems in the world. At present, the supply of fresh water generated by the Hetch Hetchy/Water Department system is more than adequate. Current projections indicate that the present system will meet San Francisco's needs until the year 2020. Over the years, the consumption of fresh water in the city has risen substantially: over 100 percent between 1940 and 1971. This increase in water

consumption is primarily due to commercial expansion and has occurred despite a decline in San Francisco's resident population since 1950.

Hetch Hetchy and the Water Department should continue their excellent planning program to assure that the water supply will adequately meet foreseeable consumption demands. To this end, the City should be prepared to undertake the necessary improvements and add to the Hetch Hetchy/Water Department system in order to guarantee the permanent supply. Furthermore, San Francisco should continually review its commitments for the sale of water to suburban areas in planning how to meet future demand.

POLICY 1

Maintain an adequate water distribution system within San Francisco.

Storage reservoirs and distribution lines within San Francisco should match the pattern of development in the city. Areas most intensively developed, having the greatest water demand, should be served by facilities having the greatest capacity.

POLICY 2

Exercise controls over development to correspond to the capabilities of the water supply and distribution system.

New development places additional demands on the water supply and distribution system. Nonresidential water users, representing approximately 45 percent of the consumption in the city, have been the principal cause of the increase in total city water consumption during the period 1940 to 1971. Development

that might place too great a strain on the system should be discouraged.

POLICY 3

Ensure water purity.

San Francisco's drinking water must meet State and Federal water quality standards. Ensuring water quality means continuing the present water purification process and monitoring storage facilities and transmission lines for threats to the water supply.

POLICY 4

Promote nonpolluting recreation uses of fresh water lakes and reservoirs.

A few of San Francisco's lakes serve as a valuable source of recreation. Boating and fishing are permitted at Lake Merced, and other recreational activities are enjoyed at Stow Lake and Spreckels Lake in Golden Gate Park and at Laguna Puerca in Pine Lake Park. San Francisco should encourage continued recreational uses of these lakes where such use does not mar the scenic beauty or water quality.

Fresh water reservoirs without scenic value should be covered, wherever feasible, to prevent evaporation and to provide additional area for recreation or other compatible uses.

POLICY 5

Improve and extend the Auxiliary Water Supply System of the Fire Department for more effective fire fighting.

The Fire Department maintains and operates the Auxiliary Water Supply System

(AWSS), a water storage and distribution network that supplements the hydrants connected to the regular water distribution lines. The AWSS serves those areas of San Francisco most intensively developed. To make available the maximum amount of water for fire fighting emergencies, the AWSS should be improved and extended to other important areas of the city.

It is incumbent upon the City and County of San Francisco to undertake long-term planning for emergency preparedness. Expansions to the AWSS would improve the City's preparedness to meet potential fire disasters.

OBJECTIVE 2

CONSERVE AND PROTECT THE FRESH WATER RESOURCE.

The fresh water resource, like all natural resources, is finite and measurable. While San Francisco's water supply seems vast in relation to current demands, it should not be wasted. Supplementary sources should also be investigated.

POLICY 1

Maintain a leak detection program to prevent the waste of fresh water.

Reservoirs, storage tanks, cisterns, and pipelines can develop leaks and waste the fresh water resource. The continued operation of leak detection programs by the Water Department and Fire Department will help prevent unnecessary waste.

POLICY 2

Encourage and promote research on the necessity and feasibility of water reclamation.

Reclaiming water for public use from waste water may prove to be a necessary step in securing an adequate water supply in the future. Other communities, not as fortunate as San Francisco, are currently looking into water reclamation as a means of conserving fresh water and generating additional supply. San Francisco should investigate the future possibilities of water reclamation, especially for such purposes as fire fighting and industrial use.

Land

OBJECTIVE

ASSURE THAT THE LAND RESOURCES IN SAN FRANCISCO ARE USED IN WAYS THAT BOTH RESPECT AND PRESERVE THE NATURAL VALUES OF THE LAND AND SERVE THE BEST INTERESTS OF ALL THE CITY'S CITIZENS.

San Francisco's dramatic landforms and intimate alliance with the Bay and Ocean give the land a special value. Other elements of the Comprehensive Plan recognize the value of this land resource in recommending how the city should develop to achieve an optimum utilization of the land. Just as important as development, however, is the protection of remaining open space to preserve the natural features of the land that form such a striking contrast with the city's compact urban development. In exercising land use controls over development and in preserving permanent open space, the land should be treated as a

valuable resource to be carefully allocated in ways that enhance the quality of urban life.

POLICY 1

Preserve and add to public open space in accordance with the objectives and policies of the Recreation and Open Space Plan.

Publicly owned open space is located principally in the western half of the city. While these valuable open spaces are preserved and enhanced, great effort should be made to acquire and make available more recreation area in the eastern half of the city. Acquisition and limited filling of tideland areas in the South Bayshore District, for example, would provide needed opportunities for more recreation. The Recreation and Open Space Plan should guide the selection and improvement of land for recreation.

The usefulness of land for recreation, however, should not necessarily determine whether or not land areas ought to be preserved. Features of a scenic, geological, topographical, and ecological nature are also important criteria of their value as open space. These natural values of land should be respected.

POLICY 2

Protect land from changes that would make it unsafe or unsightly.

The excavation of land for off-site use of the removed material is subject to control by the City Planning Commission and the Department of Public Works. Quarrying or unnecessary excavation should be strongly discouraged because it defaces the landscape and can limit the usability of the land. Too much earth removal can also create a potentially dangerous slide condition.



POLICY 3

Require that filling of land adhere to the highest standards of soils engineering consistent with the proposed use.

San Francisco has had a good deal of experience with filling marshlands and shallow areas of the Bay. Recent filling has created new land for Port facilities, and the South Bayshore Plan calls for limited filling of tidelands for recreational land. The mud layer on the Bay bottom, the quality of any previously deposited fill, and the loads to be placed on the fill are all problems to be recognized in land-fill operations along the shoreline. The highest engineering standards should be followed in providing safe filled land for approved, appropriate purposes, whether for a park or a building site.

POLICY 4

Assure the correction of landslide and shore erosion conditions where it is in the public interest to do so.

The existing erosion and slide areas along the Ocean shore are within the Golden Gate National Recreation Area. It should be decided first whether all of these problems should be corrected or whether some should be left to the forces of Nature. The erosion of Ocean Beach, which merits correction, should be stabilized in accordance with the Corps of Engineers' Alternative No. 6, known as dune stabilization. Any stabilization and restoration of these damaged areas, to increase their recreational value, should be undertaken as part of the Federal administration of this recreation area.

Elsewhere in the city, corrective steps should be taken at City expense or through special assessment to solve slide and erosion problems.

POLICY 5

Prohibit construction, as a general rule, on land subject to slide or erosion.

To minimize the hazard to life and property in areas subject to slide or erosion, building should be prohibited. Likewise utilities should not be installed in these areas because of the possibility of disruption.

Flora & Fauna

OBJECTIVE

ENSURE THE PROTECTION OF PLANT AND ANIMAL LIFE IN THE CITY.

A totally manufactured environment without plants and animals would be sterile. That bit of Nature which still remains in San Francisco is a precious asset. The ecological balance of wildlife and plant communities should be protected against further encroachments.

POLICY 1

Cooperate with and otherwise support the California Department of Fish and Game and its animal protection programs.

The California Department of Fish and Game has overall authority to protect animals in San Francisco. The Municipal Code reinforces this control in protecting animals in public areas. The City should foster greater public awareness of these laws.

POLICY 2

Protect the habitats of known plant and animal species that require a relatively natural environment.

Golden Gate Park, a product of years of planning and design, provides to a certain extent the natural environment needed by wildlife and plant communities. The natural areas of Golden Gate Park should remain as they are, and any move to convert them into areas for more active recreation should be discouraged.

Other parks and undeveloped areas in San Francisco remain relatively undisturbed and provide a variety of environments for flora and fauna: beaches, sand dunes, wooded areas, open fields, grassy hills, and lakes. All these areas should be protected. The Presidio, not subject to local jurisdiction, should, nevertheless, be urged to protect animal and plant habitats within its boundaries.

POLICY 3

Protect rare and endangered species.

Although no animals found in San Francisco's land area and lakes can be considered a genuinely rare or endangered species, many are rare to *San Francisco*. A number of native plant species, on the other hand, are genuinely rare or endangered. Interested individuals and groups, together with knowledgeable public agencies such as the Recreation and Park Department and the California Academy of Sciences, should identify the rare and endangered flora and fauna that merit special protection. Cooperatively they should devise ways to assure the fullest possible protection of these species.

Transportation NOISE

INTRODUCTION

People who can clearly recollect the sights and sounds of San Francisco during the 1930's and 1940's remember how noisy the streets were then. Numerous cable cars and streetcar lines operated throughout the city. Market Street, with four sets of streetcar tracks, was extraordinarily noisy. The streetcars then were not the "quiet" PCC cars that are in use today. Automobiles, although much less numerous, were noisier than today's models. Then, of course, the bustling waterfront activity and vessels in the Bay further contributed to the sounds of the city.

Despite these noisy transportation systems, ambient or background noise levels over most of the city then were lower than now. Over the years, however, motor traffic—automobiles, trucks, and buses—has risen dramatically. Aircraft flights have multiplied. Today,

in some parts of the city, background noise levels are so high that for many people, quiet can only be found inside a building with the windows shut.

We are learning that not only does noise annoy, it can endanger our physical and even mental health. Because of this potential health hazard, some people are becoming convinced that we are as much entitled to a quiet environment as to unpolluted air and water and pure food.

PURPOSE OF THE NOISE ELEMENT

Ground transportation noises from trucks, buses, motorcycles, and poorly muffled automobiles predominate over other types of noises as the most persistent cause for complaint. This is

why Section 65302(g) of the California Government Code, added in 1972, requires all cities and counties to include a transportation noise element in their general plans.

This Transportation Noise Plan is designed to comply with that law. The plan, furthermore, is based on an analysis of present noise levels and 1995 projected noise levels and on the following basic assumptions:

- Surface transportation facilities constitute a major contributor to today's noise levels.
- People do react adversely to excessive noise when it interferes with sleep and other activities.
- People want and are entitled to a quiet environment.
- The technological means are available for reducing transportation noise levels.

OBJECTIVES AND POLICIES FOR Transportation NOISE Control

The Transportation Noise Plan is directed toward achieving an environment in which noise levels will not interfere with the health and welfare of people in their everyday activities. Much of the adverse effect of transportation noise can be reduced through sound land use planning and transportation planning. How those elements of the general planning process are implemented is crucial to achieving the goal of a quieter environment. However, in a fully developed city, such as San Francisco, where the land use and circulation patterns are by and large fixed, the ability to reduce the noise impact through a proper relationship of land use and transportation facility locations is limited. In San Francisco, major attention must be given to three main aspects of the problem: the source of the noise, the path it travels, and the receiver of the noise. In general, techniques should be designed to quiet the noise at the source, to block the path over which it is transmitted, and to shield or remove the receiver from the noise.



OBJECTIVE 1 REDUCE TRANSPORTATION-RELATED NOISE.

Much can be done to reduce noise at the source. Technological means are available for

reducing vehicular noise emissions well below present levels.

POLICY 1 Enforce noise emission standards for vehicles.

The noise emission standards of the State Vehicle Code are enforced by the California Highway Patrol on the freeways, and by the local police on the city streets. The Noise Abatement Unit of the Police Department is responsible for identifying vehicles that violate the noise emission standards and for securing the correction of the problem. This work should be continued and expanded.

POLICY 2 Impose traffic restrictions to reduce transportation noise.

Transportation noise levels vary according to the predominance of vehicle type, traffic volume, and traffic speed. Curtailing any one of these variables ordinarily produces a drop in the noise level. In addition to setting the speed limit, the City has the authority to restrict traffic on city streets, and it has done so on a number of streets. In addition, certain movement restraints can be applied to slow down traffic or divert it to other streets. These measures should be employed where appropriate to reduce noise.

POLICY 3 Limit City purchases of vehicles to models with the lowest noise emissions and adequately maintain City-owned vehicles and travel surfaces.

The City owns and operates over a thousand vehicles in addition to its large fleet of automobiles. Street noise performance specifications for City vehicles (transit; trucks; specialized vehicles, such as street sweepers, brush chippers, etc.) should be included in the purchasing procedures of the City so that the City will obtain the quietest available models.

With proper maintenance, the City's inventory of vehicles can be kept in good working order, thereby reducing the noise they generate. Proper emphasis must also be placed on smooth street surfaces and on smooth rails for the streetcars and cable cars. Trackbeds for the rail vehicles also require special attention as do the various underground elements of the cable car traction system.

POLICY 4 Regulate use of emergency sirens.

Police vehicles, fire engines, and ambulances, in their function as emergency vehicles, are entitled to the use of emergency warning sirens. Under State law, sirens must produce a sound level of at least 90 decibels at 100 feet. Many persons find these sirens—especially

Transportation NOISE

the warbling type—annoying. The warbling siren should be replaced by conventional sirens and measures should be taken to assure that the use of all sirens is restricted to assuring the emergency vehicle the right-of-way only in genuine emergencies.

POLICY 5

Retain and expand the electric trolley network.

Electric trolley buses are quiet, economical, and relatively pollution-free in their use. These benefits outweigh the adverse environmental impact of power generation or fossil fuel utilization. Electric trolleys should be retained where feasible and consideration should be given to electrifying selected existing diesel bus routes.

POLICY 6

Discourage changes in streets which will result in greater traffic noise in noise-sensitive areas.

Widening streets for additional traffic lanes or converting streets to one-way direction can induce higher traffic volume and faster speeds. Other techniques such as tow-away lanes and traffic light synchronization also facilitate heavier traffic flows. Such changes should not be undertaken on residential streets if they will produce an excessive rise in the noise level of those streets.

OBJECTIVE 2

MINIMIZE THE IMPACT OF NOISE ON AFFECTED AREAS.

The process of blocking excessive noise from our ears could involve extensive capital investment if undertaken on a systematic, city-wide scale. Selective efforts, however, especially for new construction, are both desirable and justified.

POLICY 1

Promote site planning, building orientation and design, and interior layout that will lessen noise intrusion.

Because sound levels drop as distance from the source increases, building setbacks can play an important role in reducing noise for the building occupants. (Of course, if provision of the setback eliminates livable rear yard space, the value of the setback must be weighed against the loss of the rear yard.) Buildings sited with their narrower dimensions facing the noise source and sited to shield or be shielded by other buildings also help reduce noise intrusion. Although walls with no windows or small windows cut down on noise from exterior sources, in most cases it would not be feasible or desirable to eliminate wall openings. However, interior layout can achieve similar results by locating rooms whose use require more quiet, such as bedrooms, away

from the street noise. In its role of reviewing project plans and informally offering professional advice on site development, the Department of City Planning can suggest ways to help protect the occupants from outside noise, consistent with the nature of the project and size and shape of the building site.

POLICY 2

Promote the incorporation of noise insulation materials in new construction.

State-imposed noise insulation standards apply to all new residential structures except detached single-family dwellings. Protection against exterior noise and noise within a building is also important in many nonresidential structures. Builders should be encouraged to take into account prevailing noise levels and to include noise insulation materials as needed to provide adequate insulation.

POLICY 3

Construct physical barriers to reduce noise transmission from heavy traffic carriers.

If designed properly, physical barriers such as walls and berms along transportation routes can in some instances effectively cut down on the noise that reaches the areas beyond. There are opportunities for a certain amount of barrier construction, especially along limited access thoroughfares and transit

rights-of-way (such as BART), but it is unlikely that such barriers can be erected along existing arterial streets in the city. Barriers are least effective for those hillside areas above the noise source. Where feasible, appropriate noise barriers should be constructed.

OBJECTIVE 3

PROMOTE LAND USES THAT ARE COMPATIBLE WITH VARIOUS TRANSPORTATION NOISE LEVELS.

Because transportation noise is going to remain a problem for many years to come, attention must be given to the activities close to the noise. In general, the most noise-sensitive activities or land uses should ideally be the farthest removed from the noisy transportation facilities. Conversely, those activities that are not seriously affected by high outside noise levels can be located near these facilities.

POLICY 1

Discourage new uses in areas in which the noise level exceeds the noise compatibility guidelines for that use.

New development should be examined to determine whether background and/or thoroughfare noise level of the site is consistent with the guidelines for the proposed use. If the noise levels for the development site, as shown

on the following maps (which should be revised periodically to keep them current), exceed the sound level guidelines established for that use, as shown in the accompanying land use compatibility chart, then either needed noise insulation features should be incorporated in the design or else the construction or development should not be undertaken. Since the sound levels shown on the maps are estimates based both on traffic data and on a sample of sound level readings, actual sound levels for the site, determined by accepted measurement techniques, may be substituted for them.

POLICY 2

Consider the relocation to more appropriate areas of those land uses which need more quiet and cannot be effectively insulated from noise in their present location, as well as those land uses which are noisy and are presently in noise-sensitive areas.

Many commercial and industrial activities do not need to be in a quiet area, because interior noise levels typically are already high and tend to override noise from exterior sources. On the other hand, some uses require quiet locations and cannot be effectively insulated from noise. When feasible and desirable to do so, such activities should be encouraged to relocate to quieter areas. Conversely, there may on occasion be opportunities to relocate noisy uses to areas where the noise they

generate will be less disturbing to their neighbors.

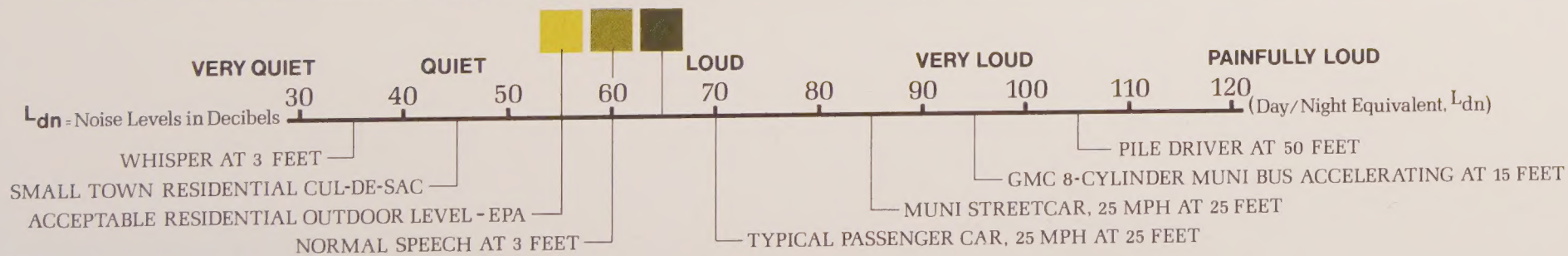
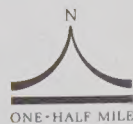
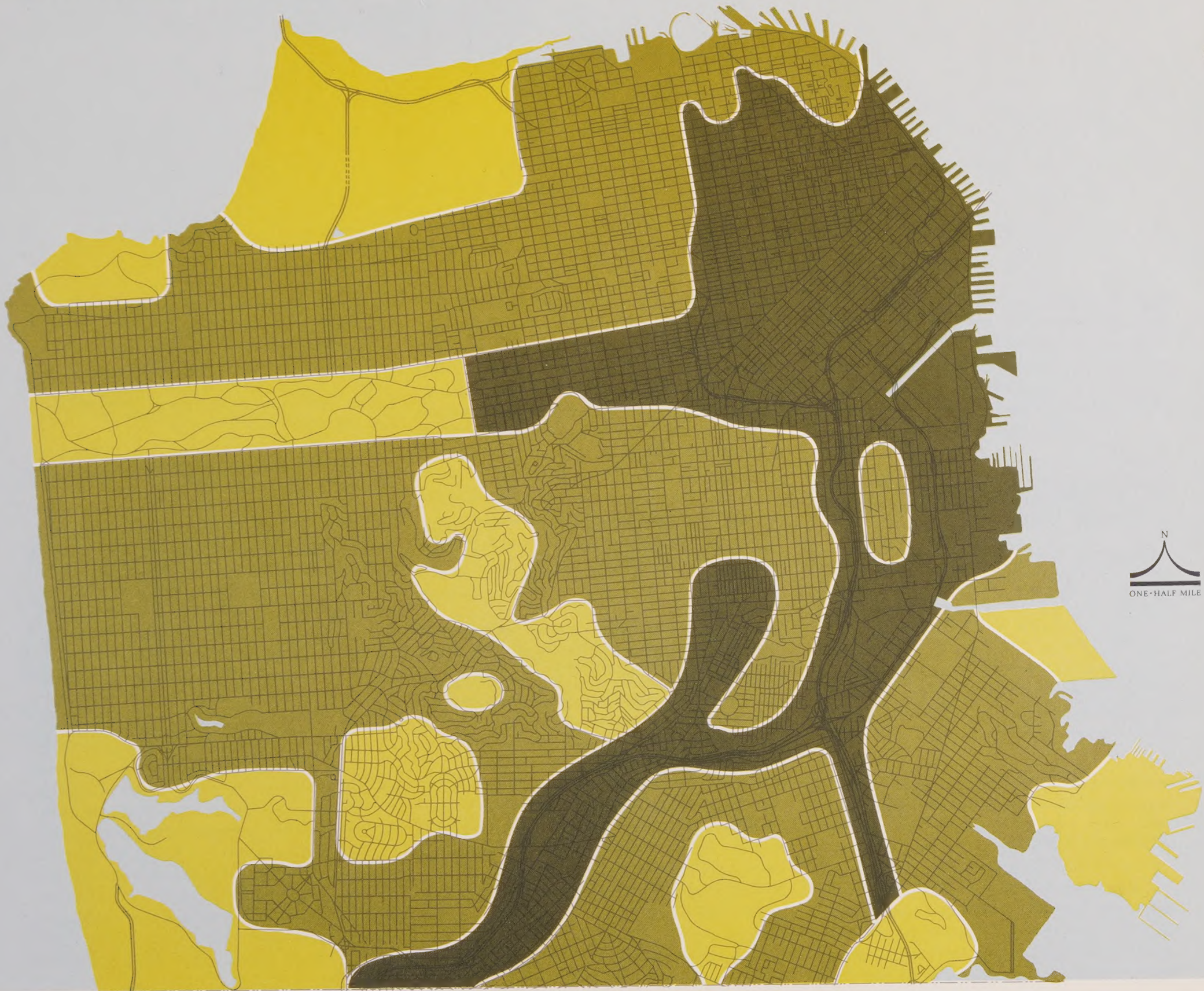
POLICY 3

Locate new noise-generating development so that the noise impact is reduced.

Developments which will bring appreciable traffic into or through noise-sensitive areas should be discouraged, if there are appropriate alternative locations where the noise impact would be less. For those activities—such as a hospital—that need a quiet environment, yet themselves generate considerable traffic, the proper location presents a dilemma. In those cases, the new development should locate where this traffic will not present a problem and, if necessary, incorporate the proper noise insulation.

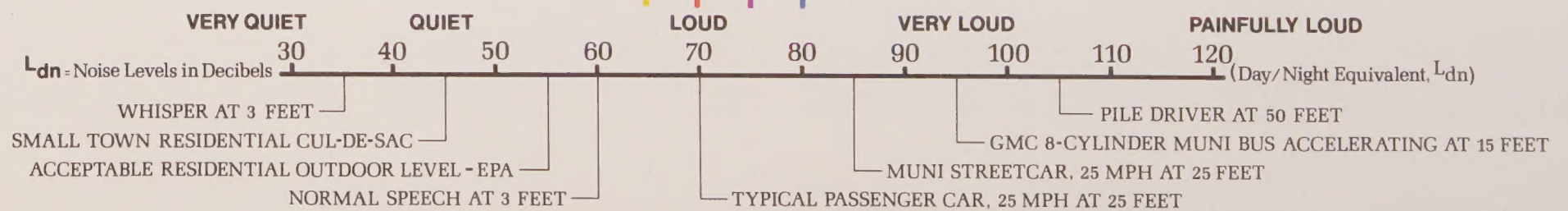
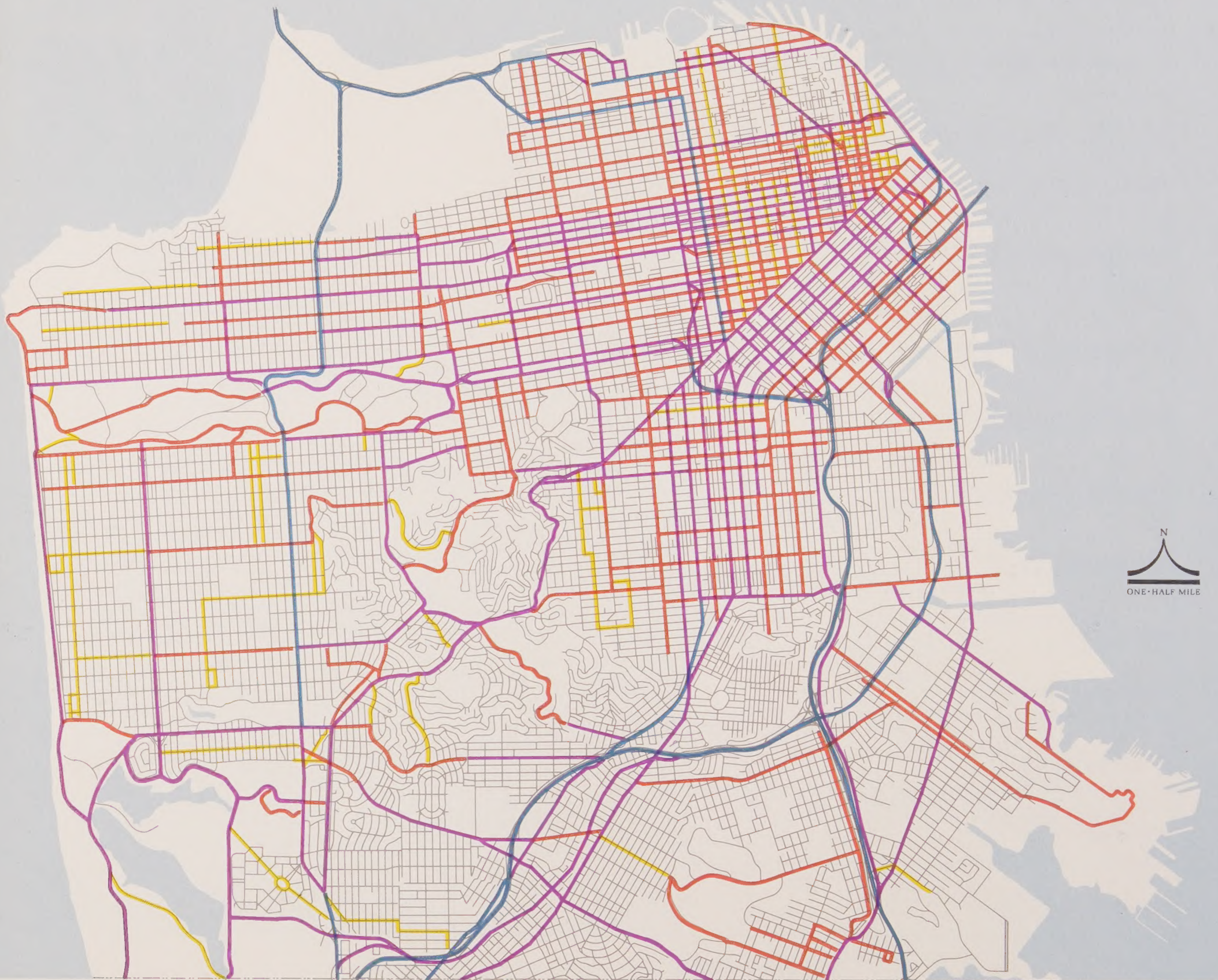
The feasibility of making noise-reducing changes to existing transportation facilities remains an obstacle to any large-scale transformation. New thoroughfares and new Municipal Railway facilities, however, offer opportunities to overcome objectionable noise aspects. Ideally, new transportation facilities should be located in areas or along routes of least noise-sensitive land uses. Where it is infeasible or undesirable to do so, special noise-suppressing design features should be incorporated into the facilities in order to make them acceptable neighbors.

BACKGROUND NOISE LEVELS · 1974

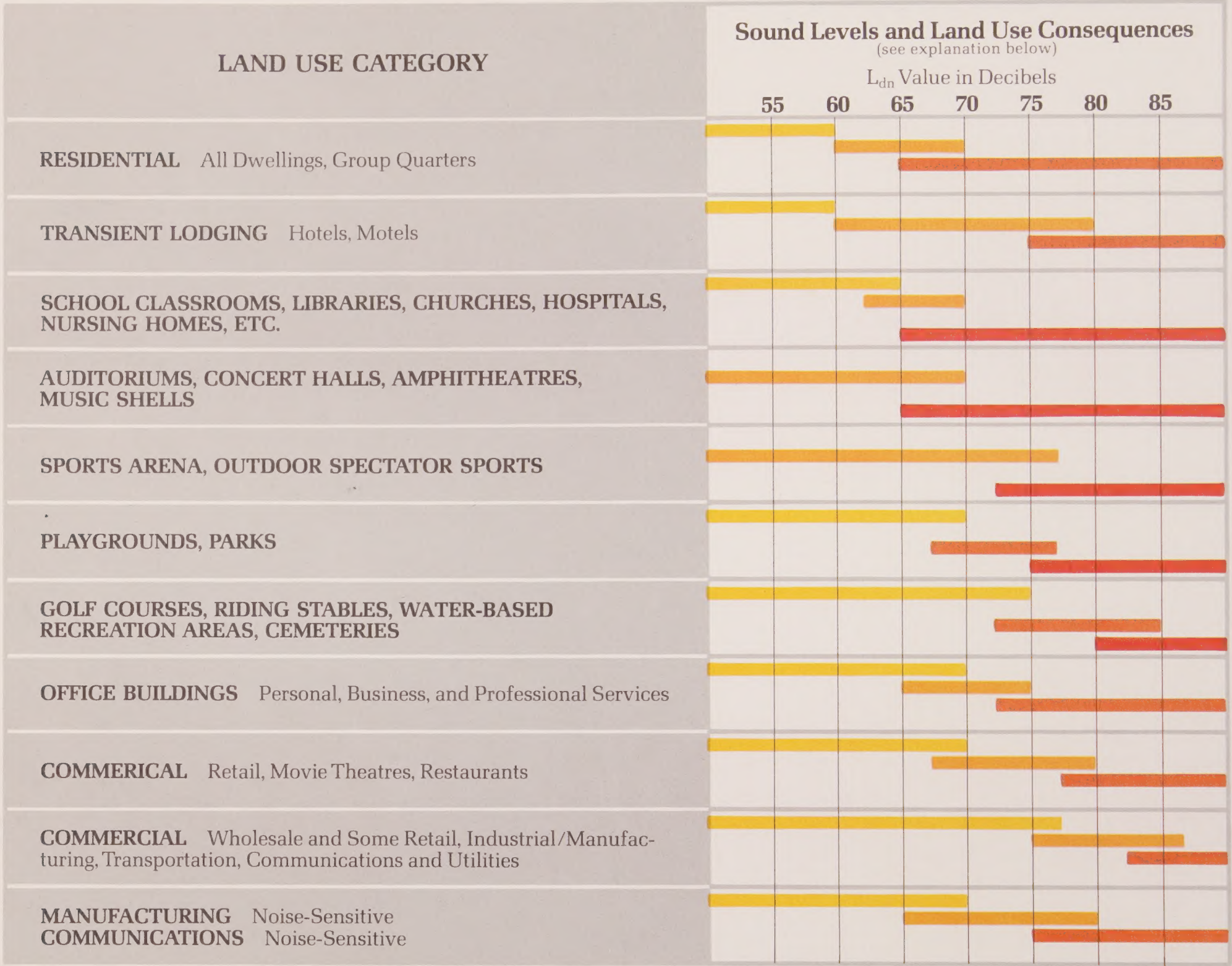


NOTE
Background Noise: The general din of street noises excluding all separate, distinguishable noise events.

THOROUGHFARE NOISE LEVELS · 1974



LAND USE COMPATIBILITY CHART FOR COMMUNITY NOISE



EXPLANATION OF LAND USE CONSEQUENCES

Satisfactory, with no special noise insulation requirements.

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

New construction or development should generally not be undertaken.

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